

DETAILED ACTION

The action is going to replace the Office action mailed 2/26/2009 due to omit 101 rejection. It is noted that the Office action mailed 2/26/2009 should be vacated.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 16-18 are rejected under 35 U.S.C. 101 because the claimed invention "a communication fee program causing a computer to perform the functions" is directed to non-statutory subject matter such that the claimed invention of communications fee program is direct to program per se, which is non-statutory subject matter.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 9 is rejected under 35 U.S.C. 102(b) as being anticipated by Kazmi (US 6044261).

Regarding **claim 9**, Kazmi teaches a communication fee service method applied to a mobile communication system, wherein: the user of mobile communication carrier's

services defines one or more specific communication areas in the service area of the mobile communication carrier; and the mobile communication carrier reduces fees charged to the user for communication in the specific communication area (Col. 2, lines 25-40).

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 10-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (hereinafter Lee) (US 6785536).

Regarding **claim 10**, Kazmi teaches a communication fee service method applied to a mobile communication system, wherein: a plurality of users of mobile communication carrier's services define their specific communication areas, respectively, in the service area of the mobile communication carrier; and the mobile communication carrier reduces fees charged to each of the users for communication in the specific communication area (Figure 4 and abstract).

Regarding **claim 11**, Lee teaches the communication fee service method applied to a mobile communication system, wherein the specific communication areas of the respective users overlap partly or completely (Col. 3, lines 16-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alho et al. (hereinafter Alho) (US 6640096) in view over Lee et al (hereinafter Lee) (US 6785536).

Regarding **claim 1**, Alho teaches mobile communication system comprising: a radio access network including a base transceiver station that has a session with the mobile terminal (Figure 1); and a core network connected to the radio access network for performing circuit switching and packet switching (Col. 3, lines 45-55); wherein the core network includes a specific communication information server for storing (Col. 4, lines 3-10):

information on a user who uses the mobile terminal ("comparing the caller ID information with each of the multiple telephone numbers in a subscriber list associated with a terminating subscriber", Col. 7, lines 44-48); information on one or more specific communication areas in which specific communication fees are applied to reduce communication fees for the mobile terminal ("one or more prestored SIDs", Col. 7, line 4); and information on one or more other communication parties, communication with which is charged at the specific communication fees (Co. 7, lines 50-64).

Alho did not teach specifically a mobile terminal having a location measurement function. However, Lee teaches in an analogous art wherein a mobile terminal having a location measurement function (abstract). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have a mobile terminal having a location measurement function so that the user can find out whether the special rate is applicable or not for a particular call.

Regarding **claim 2**, Alho teaches the mobile communication system claimed in claim 1, wherein the specific communication area is defined by a contract between the user of the mobile terminal and the mobile communication carrier that manages the mobile communication system ("predetermined geographic area", Col. 2, lines 34-35).

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alho et al. (hereinafter Alho) (US 6640096) in view over Lee et al (hereinafter Lee) (US 6785536) and Smith (US 2003/0123632) .

Regarding **claim 3**, the combination of Alho and Lee teaches all the particulars of the claim except, wherein the specific communication areas are set by contract in the service areas of one or more mobile communication carriers each managing the mobile communication system in Japan and one or more mobile communication carriers each managing the mobile communication system abroad. However, Smith teaches in an analogous art wherein the specific communication areas are set by contract in the service areas of one or more mobile communication carriers each managing the mobile communication system in Japan and one or more mobile communication carriers each

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managing the mobile communication system abroad (Paragraphs [0013, 0016]).

Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a method wherein the specific communication areas are set by contract in the service areas of one or more mobile communication carriers each managing the mobile communication system in Japan and one or more mobile communication carriers each managing the mobile communication system abroad in order to provide billing for international call.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alho et al. (hereinafter Alho) (US 6640096) in view over Lee et al (hereinafter Lee) (US 6785536) and Kazmi (US 6044261).

Regarding **claim 4**, the combinations of Alho and Lee did not teach specifically teaches the mobile communication system, wherein, when the user of the mobile terminal makes a call, while located in the specific communication area, to a mobile terminal located outside the area, communication with which is charged by contract at the specific communication fee, the specific communication fee is applied to the call. However, Kazami teaches in an analogous art the mobile communication system, wherein, when the user of the mobile terminal makes a call, while located in the specific communication area, to a mobile terminal located outside the area, communication with which is charged by contract at the specific communication fee, the specific communication fee is applied to the call (Col. 3, lines 45-60). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a mobile communication system, wherein, when the user of the mobile terminal makes a call,

while located in the specific communication area, to a mobile terminal located outside the area, communication with which is charged by contract at the specific communication fee, the specific communication fee is applied to the call in order to help the subscribers to know the charge applicable to the call in advance.

Claim 5 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alho et al. (hereinafter Alho) (US 6640096) in view over Lee et al (hereinafter Lee) (US 6785536) and Linkola (US 6516190).

Regarding **claim 5**, the combination of Alho and Lee did not teach specifically teaches the mobile communication system, wherein when the mobile terminal is incapable of locating its position, the core network compares the past location measurement data of the mobile terminal obtained therefrom with location data obtained from the base transceiver station, and uses the location data as the location measurement data. However, Linkola teaches in an analogous art the mobile communication system, wherein when the mobile terminal is incapable of locating its position, the core network compares the past location measurement data of the mobile terminal obtained therefrom with location data obtained from the base transceiver station, and uses the location data as the location measurement data (Abstract). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a mobile communication system, wherein when the mobile terminal is incapable of locating its position, the core network compares the past location measurement data of the mobile terminal obtained therefrom with location data obtained from the base

transceiver station, and uses the location data as the location measurement data in order to have an effective rate charging rule.

Regarding **claim 7**, the combination of Alho and Lee did not teach specifically teaches the mobile communication system, wherein the mobile terminal displays that it is located in the specific communication area. However, Kazmi teaches in an analogous art the mobile communication system, wherein the mobile terminal displays that it is located in the specific communication area (Col. 6, lines 50-53). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a mobile communication system wherein the mobile terminal displays that it is located in the specific communication area in order to help the subscriber informing in advance about the charging rate.

Regarding **claim 8**, the combination of Alho and Lee did not teach specifically teaches the mobile communication system, wherein the specific communication fee is determined according to the amount of traffic in the specific communication area. However, Kazmi teaches in an analogous art the mobile communication system, wherein the specific communication fee is determined according to the amount of traffic in the specific communication area (Col. 7, lines 40-45). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have a communication system wherein the specific communication fee is determined according to the amount of traffic in the specific communication area in order to help the service provider to make the system very efficient.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Alho et al. (hereinafter Alho) (US 6640096) in view over Lee et al (hereinafter Lee) (US 6785536) and Offer (US 6954630).

Regarding **claim 6**, the combination of Alho and Lee teaches all the particulars of the claim except, wherein the specific communication information server requests the mobile terminal for the location measurement data thereof while the mobile terminal is in communication. However, Offer teaches in an analogous art a system wherein the specific communication information server requests the mobile terminal for the location measurement data thereof while the mobile terminal is in communication ("network requests the zone identifier, Col. 3, lines 15-20). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have a system wherein the specific communication information server requests the mobile terminal for the location measurement data thereof while the mobile terminal is in communication in order to process the zone based billing.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Russel (2004/0249915) in view of Jiang et al. (hereinafter Jiang) (US 2004/0087305).

Regarding **claim 12**, Russell teaches a communication fee service method applied to a mobile communication system, wherein, when a first specific communication area is set for a mobile terminal in the service area of a first mobile communication carrier and a second specific communication area is set for another

mobile terminal in the service area of a second mobile communication carrier in business partnership with the first mobile communication carrier, the first mobile communication carrier for communication between the mobile terminals in the first and second specific communication areas ("preferred roaming lists", "service providers in different geographic regions", Paragraphs [0020], location based billing which allows the network to charge relative to its position in the network", Paragraph [0109]). Russel did not teach reduced fees. However, Jiang teaches in an analogous art reduced fees ("user could earn rewards for partner networks", Paragraph [0187]). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to have reduced fees in for partner networks in order to attract customers.

Claim 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazmi (US 6044261) in view of Lee et al. (hereinafter Lee) (US 6785536), Skog (US 6427076) and Offer(US 6954630).

Regarding claim 14, Kazmi teaches a communication fee service method applied to a mobile communication system comprising a mobile terminal having a location measurement function, a radio access network including a base transceiver station that has a session with the mobile terminal, and a core network connected to the radio access network for performing circuit switching and packet switching, the communication fee service method comprising the steps of:

the mobile terminal transmitting location data that the mobile terminal is located in its specific communication area to the core network ("home zone ID", Col. 6, line 3);

the core network recognizing that the mobile terminal has been located in the specific communication area, and referring to the timestamp of the location data to determine whether or not the location measurement data has expired (col. 5, lines 59-64, col. 6, lines 19-21);

the core network checking the area based on the location measurement data when the location measurement is still valid, and also checking the other communication party ("called party", col. 6, lines 40-45);

the core network determining whether or not specific communication which is charged at a specific communication fee is to be performed based on the results of the checks for the area and the other communication party (Col. 6, lines 40-45);

the core network informing the mobile terminal, when the specific communication is to be performed, that the communication to be performed is the specific one if the other communication party responds to the call, and charging the specific communication fee; and the mobile terminal determining whether or not the information from the core network indicates the specific communication, and, when the information indicates the specific communication, displaying that the communication to be performed is the specific one (Col. 6, lines 50-54).

Kazmi did not teach specifically location measurements (Kazmi is using home zone ID to find the location). However, Lee teaches in an analogous art location measurements (Col. 5, lines 36-55). Therefore, it would be obvious to one of ordinary

skill in the art at the time of invention to use location measurements that could improve accuracyin providing home zone service.

The combination of Kazmi and Lee did not teach specifically flag indicating that mobile communication terminal is located in its specific communication area. However, Skog teaches in an analogous art flag indicating that mobile communication terminal is located in its specific communication area (Abstract). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a flag indicating that mobile communication terminal is located in its specific communication area in order to inform the network that the location update is occurring.

The combination of Kazmi, Lee and Skog did not teach specifically the core network checking the area based on the past location data and location data of the mobile terminal obtained from the base transceiver station when the location measurement is already invalid, and also checking the other communication party. However, Offer teaches in an analogous art wherein the core network checking the area based on the past location data and location data of the mobile terminal obtained from the base transceiver station when the location measurement is already invalid, and also checking the other communication party (Col. 4, lines 56-60). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use a method wherein the core network checking the area based on the past location data and location data of the mobile terminal obtained from the base transceiver station when the location measurement is already invalid, and also checking the other communication party in order to provide efficient location based billing.

Claim 17 is rejected for the same reason as set forth in claim 14.

Claims 13, 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edge (US 2003/0119526) in view over Lee et al (hereinafter Lee) (US 6785536).

Regarding **claim 15**, Edge teaches a communication fee service method applied to a mobile communication system comprising a mobile terminal having a location measurement function, a radio access network including a base transceiver station that has a session with the mobile terminal, and a core network connected to the radio access network for performing circuit switching and packet switching, the communication fee service method comprising the steps of: the core network requesting the mobile terminal for location measurement data; the mobile terminal transmitting the location measurement data to the core network; the core network receiving the location measurement data, and checking the area to determine whether or not it corresponds to a specific communication area ("to verify whether the MS actually is within the home zone area", Paragraph [0014, 0031]).

Edge did not teach specifically the core network informing the mobile terminal, when the area corresponds to the specific communication area, that the communication is the specific one, and reviewing the charge rate; and the mobile terminal determining whether or not the communication is the specific one, and, when the specific communication is being performed, displaying the indication of the specific communication. However, Lee teaches in an analogous art the core network informing

the mobile terminal, when the area corresponds to the specific communication area, that the communication is the specific one, and reviewing the charge rate; and the mobile terminal determining whether or not the communication is the specific one, and, when the specific communication is being performed, displaying the indication of the specific communication (col. 5, lines 55-65). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to use the core network informing the mobile terminal, when the area corresponds to the specific communication area, that the communication is the specific one, and reviewing the charge rate; and the mobile terminal determining whether or not the communication is the specific one, and, when the specific communication is being performed, displaying the indication of the specific communication so that the mobile take a decision whether to continue the call or not.

Claims 13 and 16 are rejected for the same reason as set forth in claim 15.

Regarding **claim 18**, Edge teaches a communication fee service program ("home zone billing", Paragraph [0014]), causing a computer to perform the functions of: requesting a mobile terminal for location measurement data (Paragraph [0031]); receiving the location measurement data, and checking the area to determine whether or not the mobile terminal is located in a specific communication area ("to verify whether the MS actually is within the home zone area", Paragraph [0014]).

Edge did not teach specifically informing the mobile terminal, when the mobile terminal is located in the specific communication area, that the communication is the specific one, and reviewing the charge rate. However, Lee teaches in an analogous art

informing the mobile terminal, when the mobile terminal is located in the specific communication area, that the communication is the specific one, and reviewing the charge rate (Col. 5, lines 55-65). Therefore, it would be obvious to one of ordinary skill in the art at the time of invention to inform the mobile terminal, when the mobile terminal is located in the specific communication area, that the communication is the specific one, and reviewing the charge rate so that the mobile take a decision whether to continue the call or not.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MUTHUSWAMY G. MANOHARAN whose telephone number is (571)272-5515. The examiner can normally be reached on 7:00AM-2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eng George can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
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